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CLIMATE-FRAGILITY RESEARCH PAPER:

THE CLIMATE CHANGE- CONFLICT CONNECTION

THE CURRENT STATE OF KNOWLEDGE

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Climate-Fragility Discussion Paper

The climate change-conflict connection - The current state of knowledge of knowledge

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The **Climate Security Expert Network**, which comprises some 30 international experts, **supports the Group of Friends on Climate and Security and the Climate Security Mechanism** of the UN system. It does so by synthesising scientific knowledge and expertise, by advising on entry points for building resilience to climate-security risks, and by helping to strengthen a shared understanding of the challenges and opportunities of addressing climate-related security risks.

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SUMMARY

Research on compound climate-fragility and conflict risks has developed rapidly over the past two decades, reflecting the growing urgency of the topic. Going beyond establishing a statistical, direct link, qualitative research is now demonstrating the complex relationship between climate change impacts and conflict through a variety of pathways. Evidence from programming also points to the importance of identifying and focusing on how climate change impacts such as increasing temperatures, drought, sea level rise, and more frequent and more intense extreme weather events are creating more volatile food prices, increasing competition for natural resources and making livelihoods less secure. This can contribute to more conflict and fragility, in particular when interacting with other well-established conflict drivers such as inequality and marginalisation. However, some important knowledge gaps remain, so there are opportunities for new research to improve understanding of climate-fragility risks and improve the programmes used to address them.

1. INTRODUCTION

This Policy Brief takes stock of what we currently know about the links between climate change, fragility and conflict, summarizing evidence from research and practice of the last 25 years. It is based on a review of more than 80 quantitative and qualitative peer-reviewed research articles and grey literature from development organisations and agencies.

In the first part of this policy brief, we outline how research on the links between climate change, fragility and conflict first started and summarise evidence from existing quantitative and qualitative studies. We then analyse findings from projects and programmes in the fields of peacebuilding and/or climate change adaptation. Lastly, we identify current knowledge gaps and new research areas that can help improve understanding of how to address these risks in different contexts.

2. EVIDENCE FROM RESEARCH

The conceptualization of the links between climate change and conflict started in the 1990s. Early theories (CNA, 2007; Parry et al., 2007; Brauch et al., 2009; Evans, 2010) were, however, overly simplistic, deterministic and reductionist. Based on Homer-Dixon's (1994) 'resource wars' argument, they tried to establish a direct link between climate change - which causes competition over scarce resources and increases vulnerability due to a higher frequency of natural hazards - and violent conflict.

In the late 2000s, a second school of literature emerged, which stressed that "climate change factors do not cause violent conflict, but rather affect the parameters that are sometimes important in generating violent conflict" (Barnett and Adger, 2007). Climate change came to be increasingly understood as a "threat multiplier", which exacerbates existing conflict risks and dynamics. This literature also highlighted the critical role that other fragility risks, in particular illegitimate and ineffective governance and institutions, play in responding to climate variability and change and in determining the likelihood of violent conflict (Evans, 2010; Lind et al., 2010; Schoch, 2011).

Based on this theoretical understanding, both quantitative and qualitative researchers formulated and tested different hypotheses.

1.1 Quantitative Research

Over the past 20 years, researchers have applied a growing number of quantitative approaches to understand the links between climate, conflict and fragility (Buhaug 2010; 2014; Burke et al. 2015; O'Loughlin et al. 2012). The results of these studies, however, varied: 48% found that climate change influences conflict, 28% produced mixed results and 12% found no link (Detges, 2017). The failure to draw a clear picture points towards the limitations of current statistical models, rather than the overall absence of an indirect relationship between climate, conflict and fragility.

Important deviations in the results of statistical analyses stem from the difference in dependent and independent variables applied in these studies. For example, some studies look at monthly changes in temperature to try and find correlations with local conflicts, while others focus on yearly deviations from historical precipitation and the links to civil war. This makes it difficult to compare findings and to draw general conclusions.

What is more, since that the connection between climate change and conflict is often indirect and dependent on different political and socio-economic factors, it can be difficult to describe it in a quantitative way. This is especially the case for phenomena such as identity politics or grievances, which are notoriously hard to measure. Statistical models that are better able to reflect these effects are still in their early stages, and comprehensive

data sets for a range of intermediary variables are still missing. Hence, quantitative approaches are not yet able to fully analyse complex climate-conflict links.

1.2 Qualitative Research

Responding to these limitations, recent studies have focused more on when, where and how particular compound climate-fragility risks are likely to interact, and what role specific context factors play. Qualitative methodologies have been introduced to analyse these relationships in specific contexts. Four key findings emerge from these studies:

➤ **Livelihoods and food security**

Climate change was found to most directly impact natural resource-dependent livelihoods in rural areas by decreasing agricultural yields, contributing to land degradation or reducing water availability (Stark et al., 2009). These impacts can increase migration to neighbouring communities, urban areas or to neighbouring countries, and lead to negative coping strategies such as cattle raiding, petty crimes or deforestation (Rüttinger et al., 2015). Indirect impacts of climate change on global supply chains also affect food prices, and can lead to “food riots” when combined with political grievances and dissatisfaction with existing governance mechanisms (Evans, 2009; Gregory et al., 2005; Werrell and Femia, 2013). Pre-existing contextual challenges, such as a history of conflict, marginalization and unequal land distribution, were found to interact with and reinforce climate-fragility risks (Evans, 2010).

➤ **Governance**

The role of governance in linking climate change, fragility and conflict has been observed in a range of different contexts from the Sahel to South Asia, Central Asia, Latin America and Africa (UNEP, 2011; Vivekananda et al., 2014; Janes, 2010; Stark et al., 2009; Goulden and Few, 2011). Several studies confirmed that conflict risks are higher in those contexts where communities lack the institutions, economic stability and voice to cope with increases in the frequency and severity of climate change impacts (UNEP, 2011). However, the literature exploring the links between climate change, conflict and fragility is still largely silent on the role of governance and power (e.g., Hsiang et al., 2014).

➤ **Social cohesion**

An increasing number of studies are drawing attention to how climate change undermines the ability of governments to deliver services for its population (see, for example, Werrell and Femia, 2013; Vivekananda et al., 2019). As climate change increases the risks faced by citizens, the pressure on governments to guarantee core functions and deliver basic services also increases. Failure to meet people’s expectations sheds light on the fault lines of weak governance structures, negatively influencing people’s perceptions of governments’ legitimacy and effectiveness. Ultimately, this can increase the risk of civil unrest (Kaplan, 2009). The negative impacts of climate change on livelihoods in combination with limited governance have also been linked to the growth of non-state armed groups, terrorism and organized crime (Nett and Rüttinger, 2016).

➤ **Peace-positive climate change adaptation**

Several studies show that climate change adaptation action can have a stabilising influence on weak or fragile states and reduce vulnerabilities, conflict, crime and insecurity (see, e.g. Tänzler et al., 2013). In order to have a stabilizing effect, they need to include processes that build trust and relationships and/or cooperation and networks (social capital) between conflicting groups and between the government and the people (e.g. through shared management of natural resources, meaningful consultations with residents and social accountability mechanisms). Multi-sectoral interventions are needed to address different risks, while also contributing to

poverty alleviation and development opportunities (Hegre et al., 2016; Mitra et al., 2017; Tänzler et al., 2013). At the same time, the unintended negative consequences of climate change adaptation have to be closely monitored as they can exacerbate existing tensions, or create new ones in already fragile contexts (Rüttinger et al., 2015). When examining climate-conflict links to support improved programming, a thorough understanding of the context should always be the starting point (Vivekananda et al., 2019). This requires top-down assessments at the national level, as well as local approaches through participatory, inclusive and community-based methodologies (UNEP, 2019). It is also important to consider that the context is likely to change in the course of the programme, including as a result of the interventions themselves. Therefore, it is important to allow for adaptive management and flexibility for “course correction” (Leavy et al., 2018).

3. EVIDENCE FROM THE GROUND

While there remains little guidance on how to do this in practice¹, our review of existing projects and programmes working on sustainable livelihoods, natural resources management, climate change adaptation and (environmental) peacebuilding revealed a number of the principles and best practices that can guide efforts to tackle climate, fragility and conflict risks, including:

➤ **Understanding the context:**

When examining climate-conflict links to support improved programming, a thorough understanding of the context should always be the starting point (Vivekananda et al., 2019). This requires top-down assessments at the national level, as well as local approaches through participatory, inclusive and community-based methodologies (UNEP, 2019). It is also important to consider that the context is likely to change in the course of the programme, including as a result of the interventions themselves. Therefore, it is important to allow for adaptive management and flexibility for “course correction” (Leavy et al., 2018).

➤ **Addressing the Governance issues:**

Conflict and climate risks often arise out of situations characterised by governance deficits, persistent structural inequalities, and lack of capacity and resources to implement responses across government. An increasing number of climate change and peacebuilding programs have therefore started addressing governance dimensions and adopting conflict-sensitive approaches to avoid reinforcing existing risks, or creating new ones. The experiences of USAID in the Horn of Africa, or the BRACED programme, for example, highlight the importance of integrating governance-focused initiatives in peacebuilding and climate change adaptation programming, including at the community level, to strengthen resilience and achieve adaptation and peacebuilding outcomes together (USAID 2017, 2018; McDonnell et al., 2017).

➤ **Focusing on natural resources:**

Several peacebuilding programmes have focused on understanding the impacts of climate change on availability of and access to natural resources. The experience of Mercy Corps and UNEP, for instance, shows that improving access to and management of natural resources can have immediate positive impacts on livelihoods and income generation, thus also contributing to strengthening social cohesion between and within communities (Mercy Corps 2015, 2019; UNEP 2012).

¹ With some notable exceptions, such as the UNEP climate change and security project, which developed a number of guidance materials (UNEP, 2019). In the framework of the Adaptation Thought Leadership and Assessments programme, USAID also produced a review of evidence and practice from development projects that have attempted to address compound climate-fragility risks (USAID, 2019).

⇒ **Supporting sustainable livelihoods:**

Several programs emphasised the importance of supporting sustainable and diversified livelihoods as a strategy to achieve both peacebuilding and climate change outcomes. Interventions such as the rehabilitation of water sources and rangelands, or the introduction of alternative energy options for households were shown to support livelihood security, thus also reducing the risk of competition, violence and conflict between and within communities (USAID 2017, 2018; Mercy Corps 2015). These experiences also showed that interventions to promote sustainable livelihoods need to be complemented with other activities to foster an enabling environment, for example, by creating market linkages and employment opportunities (Leavy et al., 2018).

⇒ **Committing to long-term engagement:**

Long-term engagement - provided it is climate- and conflict-sensitive - was found to be important to create the enabling environment that is needed to create transformative change. For example, it allowed Mercy Corps to adopt an approach to conflict resolution focused on changing social norms, behaviours and attitudes, aimed at helping communities avoid falling back into previous conflict patterns during shocks and stresses (Mercy Corps, 2019). If backed by a strong monitoring and evaluation framework, long-term engagement can also help ensure that lessons learned are captured and shared across different sectors and countries, which in turn is essential to contribute to the broader policy agenda and to inform ongoing program activities (Vivekananda et al., 2019).

⇒ **Thinking carefully about financing:**

Several studies note the importance of “smarter” financing to ensure that programs contribute to resilience to different stresses and shocks. Smarter financing involves ensuring that the interventions receive the right amount of financing (UBA, 2018), delivered through appropriate tools (HRW, 2019), and over a timeframe that allows policymakers to act quickly, while staying engaged over a longer time (OECD; 2012). More coherence and complementarity between interventions and policy areas also need to be ensured, for example by including foreign, security and trade policies, in addition policies along with to development and humanitarian programming (Batmanglich, 2019).

4. KNOWLEDGE GAPS AND EMERGING RESEARCH AREAS

While our understanding of the links between climate change, conflict and fragility has improved significantly over the past 25 years, some knowledge gaps remain. Based on our review of the existing literature on this topic, we have identified the following research priorities that could help advance the evidence base:

- ⇒ More in-depth case studies that combine **qualitative conflict analysis** to understand the specific mechanisms by which climate change interacts with conflict drivers **and quantitative climate projections and models**. (Vivekananda et al, 2019)
- ⇒ **Quantitative research** that focuses on a) spatial and temporal disaggregation, b) comparability of findings, c) contextual factors linking climate change to conflict and d) possible impacts of future global warming on societies’ ability to adapt (Buhaug et al., 2014; Burke et al., 2015; Carleton et al., 2016).

- A better understanding of **migratory movements** influenced by climate change impacts, in relation to fragility and conflict, particularly by slow-to rapid-onset events (Bhavnani and Lacina, 2015; Stapleton, 2017).
- More evidence of the **security implications of low carbon development strategies**, as these aim for a major transformation of existing political, social, economic and environmental systems and may therefore have unintended negative consequences on governance structures, conflict and marginalisation.
- Identify and develop **innovative approaches to monitoring and evaluation tools and frameworks** based on a sound theory of change and adaptive programming that can measure project impacts both in terms of building peace and climate change resilience.

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